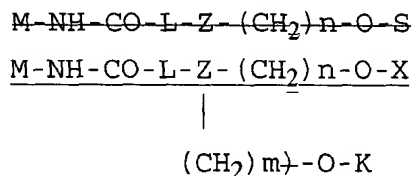


## CLAIMS

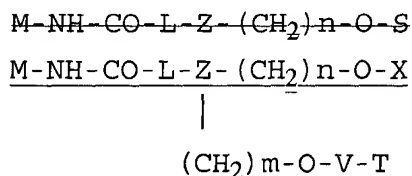
1. ~~Labelling~~A labelling reagent having the structure



in which

- M is a detectable label
- L represents a linker having the structure  
- (CH<sub>2</sub>)<sub>p</sub>- or the structure - (CH<sub>2</sub>)<sub>p</sub>-CO-NH-
- Z is either CH or N,
- SX is a cleavable protective group
- n, m and p are, independently of one another,  
natural numbers from 1-15,
- O-K is either a phosphoramidite,  
or K = -V-T, such that T is a solid phase support  
material and  
V is a linking group containing a cleavable bond.

2. ~~Labelled~~A labelled reactive support having the  
structure

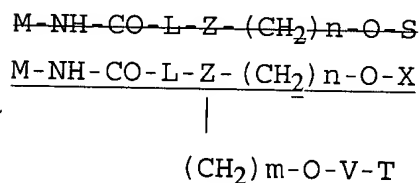


in which

- M is a detectable label
- L represents a linker having the structure

- (CH<sub>2</sub>)<sub>p</sub>- or the structure - (CH<sub>2</sub>)<sub>p</sub>-CO-NH-
- Z is either CH or N,
- SX is a cleavable protective group,
- n, m and p are, independently of one another, natural numbers from 1-15,
- T is a solid phase support material, and
- V is a linking group which contains a cleavable bond.

3. ~~Labelled~~A labelled reactive support having the structure



in which

- M is a detectable label
- SX is a cleavable protective group,
- n, m and p are, independently of one another, natural numbers from 1-15,
- T is a solid phase support material, and
- V is a linking group which contains a cleavable bond

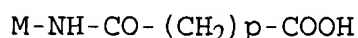
~~characterized in that~~wherein L represents a linker having the structure

- (CH<sub>2</sub>)<sub>p</sub>-CO-NH-

and p is a natural number from 1-15.

4. ~~Support~~A support as claimed in ~~claims 2-3,~~  
~~characterized in that~~claim 2, wherein the support  
material consists of glass particles having a defined  
pore size.

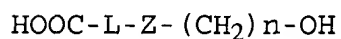
5. ~~Support~~A support as claimed in ~~claims 2-4,~~  
characterized in ~~that~~claim 2, wherein the detectable  
label M is a fluorescent dye, preferably fluorescein.
6. ~~Use of~~A method of preparing a solid support, said  
method comprising using a molecule having the structure

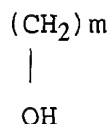


in which p represents a natural number between 1 and 15  
and M is a detectable label, to prepare a support as  
claimed in claims 2-5.

7. ~~Process~~A process for the production of a support as  
claimed in claims 2-5, comprising the following steps:
  - a) preparing a trifunctional spacer containing two  
reactive hydroxyl groups and one reactive amino  
group
  - b) introducing a protective group on a hydroxyl group
  - c) converting the carboxylic acid group of a molecule  
as claimed in claim 6 into an activated ester
  - d) coupling the activated ester to the reactive amino  
group of the trifunctional spacer
  - e) coupling the hydroxyl group of the trifunctional  
spacer which is still free to the support material.

8. ~~Use of~~A method of preparing a support, said method  
comprising using a trifunctional spacer having the  
structure





in which

- Z is either CH or N
- L is a linker having the structure  $-(\text{CH}_2)_p-$  or the structure  $-(\text{CH}_2)_p-\text{CO}-\text{NH}-$  and
- m, n and p each, independently of one another, a natural number between 1 and 15,

to prepare a support as claimed in claims 2-5.

9. ~~Process~~ A process for the production of a support as claimed in claims 2-5, comprising the following steps:

- a) preparing a trifunctional spacer ~~as claimed in~~ using the method of  
claim 8
- b) introducing the protective group on a hydroxyl group
- c) converting the carboxylic acid group of the trifunctional spacer into an activated ester
- d) coupling a detectable molecule containing a free amino group by reacting the active ester with the amino group
- e) coupling the hydroxyl group that is still free to the support material.

10. ~~Use of~~ A method to synthesize labelled nucleic acids comprising using a support as claimed in claims 2-5 to synthesize 3'-labelled nucleic acids.

11. ~~A 3'-labelled nucleic acid molecule prepared with the aid of~~by a method comprising using a support as claimed in claims 2-5.

12. ~~Nucleic acid molecule which contains a substituent having the partial~~A compound comprising a nucleic acid molecule having a substituent with the structure



~~that~~at the 3'-position of the 3'-terminal ribose, in which M is a detectable label such as a fluorescent dye.

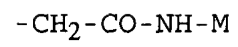
13. ~~Labelling~~A labelling reagent as claimed in claim 1, characterized in thatwherein O-K is a phosphoramidite.

14. ~~Labelling~~A labelling reagent as claimed in claim 13, characterized in thatwherein the detectable label M is a fluorescent dye, preferably fluorescein.

15. ~~Use of~~A method of synthesizing labelled nucleic acids comprising using a labelling reagent as claimed in claims 13-14 to synthesize labelled nucleic acids.

16. ~~Labelled~~A labelled nucleic acid molecule prepared with the aid ofby a method comprising using a labelling reagent as claimed in claims 13-14.

17. ~~Nucleic~~A nucleic acid molecule as claimed in claim 16 containinghaving a substituent ~~having~~with the ~~partial~~ structure



in which M is a detectable label such as a fluorescent dye.